Chronic Disease Indicators: Indicator Definition

Mortality with diabetes

Category:	Diabetes
Demographic Group:	All resident persons.
Numerator:	Deaths with International Classification of Diseases (ICD)-10 codes E10–E14 (ICD-9 code 250) as an underlying or contributing cause of death among residents during a calendar year.
Denominator:	Midyear resident population for the same calendar year.
Measures of Frequency:	Annual number of deaths. Annual mortality rate — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 4*) — with 95% confidence interval.
Time Period of Case Definition:	Calendar year.
Background:	During 2002, diabetes was the sixth leading cause of death in the United States, resulting in approximately 73,000 deaths. Diabetes is three times as likely to be listed as a contributing cause of death than as the underlying cause of death. The leading underlying cause of death for deaths with diabetes listed as contributing cause is cardiovascular disease.
Significance :	Multiple long-term complications of diabetes can be prevented through glucose, lipid, and blood pressure regulation, and through screening and treatment for eye, foot, and kidney abnormalities. Means to prevent complications include improved patient education and self-management and provision of adequate and timely screening services and medical care.
Limitations of Indicator:	Approximately one third of cases of diabetes are undiagnosed. Diabetes is listed on the death certificates of only approximately half of decedents who actually had diabetes. Because diabetes has a long preclinical and clinical phase, years might pass before changes in behavior or clinical practice affect population mortality.
Data Resources:	Death certificate data from vital statistics agencies (numerator) and population estimates from the U.S. Bureau of the Census or suitable alternative (denominator). http://wonder.cdc.gov/
Limitations of Data Resources:	Causes of death and other variables listed on the death certificate might be inaccurate. The number of contributing causes of death listed on the death certificate can vary by person completing the death certificate and geographic region. If this estimate is calculated within the diabetes population, restrict the denominator to only persons with diabetes.
Healthy People 2010 Objectives:	5-5: Reduce the diabetes death rate.

* See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. http://www.cdc.gov/nchs/data/statnt/statnt20.pdf